

CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A MOS image sensor comprising:
 - a pixel array formed from a plurality of pixels arranged in a matrix of rows and columns;
 - location processing means for providing a digital location number for each pixel of the pixel array;
 - signal processing circuitry for reading out signals from the pixel array and outputting processed pixel signals;
 - dead pixel comparator circuitry for receiving the processed pixel signals from the signal processing circuitry and examining the processed pixel signals to see if they are indicative of dead pixels;
 - location storage circuitry for receiving dead pixel information from the dead pixel comparator circuitry and for storing the digital location number generated by the location processing means for each dead pixel, wherein digital location numbers are stored in the location storage circuitry only for pixels that are determined to be dead pixels; and
 - location comparator circuitry for comparing the digital location number of a pixel that is being processed by the signal processing circuitry with the stored digital location numbers of dead pixels to determine if the pixel that is being processed corresponds to a dead pixel, wherein the pixel array and the dead pixel comparator circuitry are formed on a single integrated circuit,
wherein the location processing means comprises a location shift register for indicating the digital location number of each of the pixels to the pixel array, the location comparator circuitry, and the location storage circuitry.

2. (Canceled)

3. (Original) The image sensor of Claim 1, wherein the signal processing circuitry compensates for a dead pixel by repeating a pixel signal from a pixel that was read out prior to the dead pixel.

4. (Original) The image sensor of Claim 1, wherein the signal processing circuitry compensates for a dead pixel by averaging the pixel signal from a pixel that was read out prior to the dead pixel signal from a pixel that is read out subsequent to the dead pixel.

5. (Original) The image sensor of Claim 1, wherein the dead pixel comparator is initially activated when the image sensor is first powered on to examine the processed pixel signals from each pixel only once.

6. (Original) The MOS image sensor of Claim 5, wherein the dead pixel comparator may be activated at later times to reexamine the processed pixel signals from each pixel so as to update the dead pixel digital location numbers stored in the location storage circuitry.

7. (Previously Presented) The image sensor of Claim 1, wherein the location storage circuitry is coupled to an off chip storage area.

8-20. (Canceled)

21. (Currently Amended) An image sensor comprising:

a pixel array formed from a plurality of pixels arranged in a matrix of rows and columns;

signal processing circuitry for reading out signals from the pixel array and outputting processed pixel signals;

a location shift register for ~~incrementing location numbers for pixels in the pixel array~~
indicating a digital location number to the pixel array, wherein the location shift register
increments the digital location number for pixels in the pixel array in accordance with a
referencing scheme;

location storage circuitry for storing the location numbers only of dead pixels; and

dead pixel comparator circuitry for receiving the processed pixel signals from the signal processing circuitry and examining the processed pixel signals to see if they are indicative of dead pixels, and for indicating when the location number of a pixel that is determined to be a dead pixel should be stored by the location storage circuitry, wherein the pixel array and the dead pixel comparator circuitry are formed on a single integrated circuit.

22. (Previously Presented) The image sensor of Claim 21, wherein the pixel array, the signal processing circuitry, the location shift register and the dead pixel comparator circuitry are fabricated on a single MOS chip.

23. (Canceled)

24. (Previously Presented) The image sensor of Claim 21, further comprising location comparator circuitry for comparing the location number of a pixel that is being processed by the signal processing circuitry with the stored location numbers of dead pixels from the location storage circuitry to determine if the pixel that is being processed corresponds to a dead pixel.

25. (Currently Amended) A CMOS image sensor comprising:

a pixel array formed from a plurality of pixels arranged in a matrix of rows and columns;

means for precharging the plurality of pixels to a fixed voltage;

signal processing circuitry for reading out a signal from one of the plurality of pixels of the pixel array and outputting a processed pixel signal;

~~a location shift register for incrementing a location number for each pixel in the pixel array indicating a digital location number to the pixel array, wherein the location shift register increments the digital location number for pixels in the pixel array in accordance with a referencing scheme;~~

location storage circuitry for storing location numbers only of dead pixels; and

dead pixel comparator circuitry for receiving the processed pixel signals from the signal processing circuitry and examining the processed pixel signals to see if they are indicative of dead pixels, and for indicating when the location number of a pixel that is determined to be a dead pixel should be stored by the location storage circuitry, wherein the pixel array and the dead pixel comparator circuitry are formed on a single integrated circuit.

26. (Previously Presented) The CMOS image sensor of Claim 25, wherein the pixel array, the signal processing circuitry, the location shift register and the dead pixel comparator circuitry are fabricated on a single CMOS chip.

27. (Previously Presented) The image sensor of Claim 25, further comprising location comparator circuitry for comparing the location number of a pixel that is being processed by the signal processing circuitry with the stored location numbers of dead pixels from the location storage circuitry to determine if the pixel that is being processed corresponds to a dead pixel.